CLAIMS

We Claim:

1. A method of transferring a set of data over a network, the method comprising:

    monitoring the level of actual network bandwidth utilization;

    identifying a maximum monitored level of actual utilization;

    calculating a block size to transfer as a function of the maximum

    monitored level of utilization; and

    receiving said block size portion of the set of data over the network at

    one or more intervals.

2. The method of claim 1, wherein said maximum level of actual utilization

    comprises:

    calculating an average of network bandwidth utilization;

    calculating an average transfer rate; and

    calculating a bandwidth availability percentage.

3. The method of claim 1 wherein said block size is adjusted according to said

    maximum level of actual utilization, the method comprising bounding said block

    size between a maximum threshold value and a minimum threshold value.

4. The method of claim 3 wherein said maximum threshold is a function of

    available memory in the receiving device, and wherein said minimum threshold

    is determined based on network packet header size.

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5. The method of claim 1, wherein a client receives the data over the network from a server.

6. The method of claim 1, wherein said monitoring occurs at the interface between the client and the network.

7. The method of claim 5, further comprising:

    increasing the size of the intervals when said block size is below a minimum threshold; and

    decreasing the size of the intervals when said block size exceeds a maximum threshold.

8. The method of claim 1, wherein the network is the Internet.

9. The method of claim 1, wherein the set of data includes a software update.

10. The method of claim 1, further comprising repeating at least said monitoring each time a portion of the set of data is received.

11. The method of claim 1, wherein said maximum level derivation includes calculating an average level of utilization by repeating said monitoring a

predetermined number of times during the receipt of said portion of the set of data .

12. The method of claim 1, further comprising repeating said maximum level of actual utilization identification each time a portion of the set of data is received.

13. The method of claim 1, wherein a client sends the data over the network to a server.

14. A computer-readable medium having computer-executable instructions for performing the method recited in claim 1.

15. A computer system having a memory, an operating system and a central processor, said processor being operable to execute the instructions stored on the computer-readable medium of claim 14.

16. A computer-readable medium having stored thereon one or more data structures, comprising:

a first data field containing data representing a timestamp of when the level of actual network bandwidth utilization was monitored; and

a second data field containing data representing a quantity of data that had passed through the network interface at the a time corresponding to said time stamp.

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17. The computer-readable medium of claim 16, wherein network utilizationis calculated based on the difference in values between a first data structure and a second data structure.

18. The computer-readable medium of claim 16, wherein the actual network bandwidth utilization is monitored at an interface between a client machine and the network.

19. A computer-readable medium having computer-executable components for managing the transfer of data over a network, comprising:

a bandwidth monitoring component which monitors the level of actual bandwidth utilization for a network connection;

a network speed calculating component which calculates a network transfer speed as a function of the monitored level of utilization observed by said bandwidth monitoring component; and

a transfer management component which manages the transfer of data over the network.

20. The computer-readable medium of claim 19, wherein the network connection is an interface between a client machine and the network.

21. A method of refining network utilization determination and download data block sizes in the transfer of a set of data over a network comprising:

obtaining a network utilization rate at a plurlity of intervals;

computing an average of said network utilization rates; and

computing a block size of data to transfer during said intervals as a function of said average.

22. The method of claim 21 wherein obtaining said network utilization rate occurs at specific points in time during each of said intervals.

23. The method of claim 21 wherein said computed average is weighted by allocating a higher ratio to the more recently obtained network utilization rate.

24. The method of claim 21 wherein said block size is directly proportional to the product of said average, the size of said interval and network availability.

25. The method of claim 21 wherein said intervals have a size that is adjusted based on said computed block size.

26. The method of claim 21 further comprising transferring a minimum block of the set of data over the network to allow the refining of variables associated with the network utilization determination.

27. A computer-readable medium having computer-executable instructions for performing the method recited in claim 20.

28. A computer system having a memory, an operating system and a central processor, said processor being operable to execute the instructions stored on the computer-readable medium of claim 26.